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MANAGING THE LEARNING PROCESS:
AN EXPERIMENT IN EDUCATION

Irwin M. Rubin

460-70 September, 1970

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I am appreciative of the comments provided on an earlier draft by many of my collegues.

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"In our educational system, for example, we have neglected an important step: to work on the problem(s) involved in managing the learning of others" [1]

Introduction

Over the past few years, David Kolb, James McIntyre, and I have been involved in developing a new approach to teaching organizational psychology.[2] Many confusions have arisen as to what it is we are trying to do, the strengths and weaknesses of the particular approach chosen, its effectiveness or impact on the students involved, and where it fits in the broader picture of the Sloan School, the profession of management, and the process of education. It is hoped that a clearer understanding of the nature of this experiment can provide a meaningful basis for constructive feedback and encourage others to write up and share their own educational experiences.[3]

Underlying Assumptions and Goals

".331" is the introductory course in organizational psychology that is required of all M.S. candidates in management at the M.I.T. Sloan School. Over the years this course has had a rich and varied history. It had been taught as an academic psychology course using the lecture/discussion method; it had been a seminar course with Ph.D. candidates participating as seminar leaders;

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[1] K.E. Clark, "Too Much Basic Research," Psychology Today, editorial, March 1970.

[2] D.A. Kolb, I.M. Rubin, and J. McIntyre, Organizational Psychology: An Experiential Approach (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., available January 1971). Also, Kolb, Rubin, and McIntyre, Readings in Organizational Psychology (Englewood Cliffs, New Jersey; Prentice-Hall, Inc., available in January 1971).

[3] The Undergraduate Systems Program (USP) within the Sloan School, the Unified Science Studies Program (USSP), the Experimental Studies Group (ESG), the GLOOM game used to teach economics to SSM students are just a few examples of such educational experiments.

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it had been totally devoted to sensitivity training. In addition, any number of combinations of the above approaches had been tried. Seldom had the course been conducted the same way twice.

About three years ago, we began a serious curriculum development effort. In very broad terms, our objective was the application of the experience-based discovery teaching methods which had proven so successful in the "new mathematics" and "new science" curricula. The essence of the experiential approach, as it might be applied to organizational psychology, can be seen from the following example. One's goal, as a teacher, is to have his students understand the concept of perception and related issues of stereotyping, halo effect, selectivity, etc. Utilizing the experiential approach, one would create a situation which would personally involve the student in an active way in the process of perception. One could then help him to see where he personally stereotyped someone (or was himself stereotyped). The abstract concept of stereotyping and its relation to a theory of perception will, presumably, be more meaningful to him because he can relate it to a personal situation he just experienced. A lecturer attempts to create a similar kind of involvement by using examples to make abstract conceptual material more real.

Several considerations governed our choice of the experiential approach. First of all, since so much of behavioral theory is highly abstract it is difficult for the beginning student to grasp the meaning of important concepts without concrete examples. Therefore, demonstrations and exercises that illustrate how these concepts affect each individual's personal experience are extremely useful in this regard. By focussing these exercises around key concepts, personal experiences and conceptual material can be integrated. Secondly, the fact that we see ourselves training practicing managers, not theo-

reticians, means that we should emphasize skill over theoretical and methodological sophistication. The concepts of organizational psychology will prove useful insofar as they can increase the potential manager's understanding of himself and his organizational environment. The ultimate goal for him is to transfer this understanding into improvements in his own effectiveness as well as the effectiveness of his subordinates and his organization. Exercises that simulate individual/organization relationships provide students with psychologically safe situations in which they can assess their own values and assumptions about people, and practice and improve their own managerial style.

The third consideration is that ".331" is an introductory, one semester course. This implies that an in-depth coverage of all the important concepts in organizational psychology is impossible. Our choice was to provide a series of units designed to introduce and pique students' interest in a wide range of behavioral science concepts, encouraging the student to pursue in-depth knowledge of those concepts that interest him in other courses or on his own. An experience-based approach which encourages active exploration and self-directed learning seems ideally suited to this approach.

As we proceeded in our curriculum development effort, it became clear that we needed a model of learning that could guide us in selecting and designing classroom experiences as well as in presenting theoretical material. Our initial model[4] identified four learning modes as central to the learning process:

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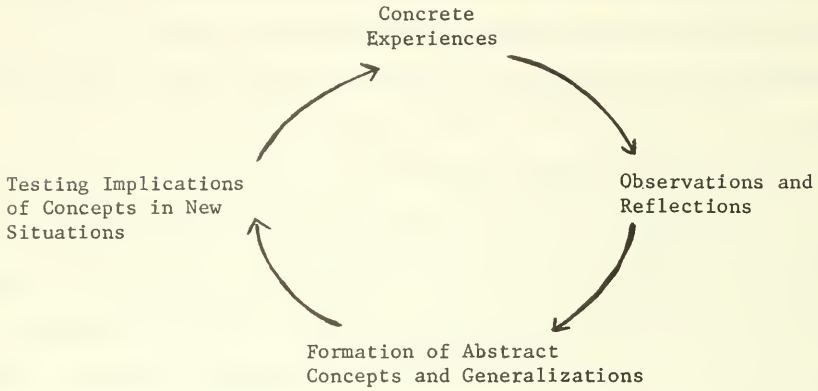
[4] A similar model was subsequently found in an excellent article by Moore and Anderson. Omar K. Moore and Alan R. Anderson, "Some Principles for the Design of Clarifying Educational Environments," in A. Goslin (Ed.), Handbook of Social Theory and Research, (Chicago: Rand McNally & Co., 1969).

1. concrete experience is followed by
2. observation and reflection which leads to
3. the formation of abstract concepts and generalizations which lead to
4. hypotheses to be tested in future action which in turn leads to new experiences.


Concrete Experiences
Observations and Reflections
Formation of Abstract Concepts and Generalizations
Testing Implications of Concepts in New Situations

Several observations can be made about this model of the learning process. First, this learning cycle is continuously recurring in living human beings. Man continually tests his concepts in experience and modifies them as a result of his observation. In a very important sense, all learning is relearning and all education is re-education. Secondly, the direction that learning takes is governed by individual needs and goals. We seek experiences that are related to our goals, interpret them in the light of our goals, form concepts and test implications of these concepts that are relevant to our felt needs and goals. The process of learning is, therefore, by implication erractic and inefficient when objectives are not clear.

Thirdly, since the learning process is directed by individual needs and goals, learning styles become highly individual in both direction and process. For example, a mathematician may come to place great emphasis on abstract concepts while a poet may value concrete experience more highly. A manager may be concerned primarily with active application of concepts, while a naturalist may develop his observational skills highly. Each of us in a unique way develops a learning style which has some weak points and strong points. We may jump into experiences but fail to observe the lessons to be derived from these experiences. We may form concepts but fail to test their validity. In some situations our objectives and needs may be clear guides to learning; in others, we wander aimlessly and our learning is not systematic or continuously reinforced.

In addition to this initial model of learning[5], our curriculum development effort was guided by a series of assumptions about the relative importance of three broad learning goals mentioned earlier: knowledge, skills, and attitudes. Our primary goal, in teaching and designing this course, was to create an environment within which students could explore their own attitudes and feelings with respect to themselves, others, and the managerial role. In the process, we wanted to help them to sharpen their diagnostic skills with respect to understanding themselves, others, groups, and social systems. Consequently, knowledge, in the more traditional sense of facts, figures, and

[5]This model has been translated into a Learning Styles Inventory aimed at helping people identify their predominate learning modes. In some preliminary research, as would be predicted, people who emphasize "concrete experience" and "observation and reflection" are more likely to elect to participate in a voluntary sensitivity training laboratory. See also, Perna, Frank, Jr., "An Analysis of Learning Profiles of Managers," M.S. thesis, Sloan School of Management, M.I.T., June 1970.

theories, is important and integrated to the extent that it helps the individual better understand and generalize his unique experiences. No one goal - knowledge, skills, or attitudes - is viewed as more or less valuable, but the important issue for us is twofold: the need to begin first with concrete experiences; and to make certain, as we have emphasized, that a person then goes through all four stages of the total learning process.

WHAT IS 15.331? THE CONCRETE EXPERIENCE

With this model of learning as a guide we developed a series of experiential learning units for the course. The course was designed to focus on a particular key concept in organizational psychology each week of the semester. The units were designed to accomodate a three hour time period - two hours for the unit itself and an hour for lecture, discussion, or other activities. The format of a typical unit was built around the learning model, with inputs focussing on each of the four learning modes:

1. A concrete experience (a game, simulation, self-awareness exercise, or group experience.)

2. A procedure for reflection, observation, and discussion of the experience.

3. Conceptual material in the form of readings, unit summaries, and lectures.

4. A Personal Application Assignment (PAA). The student is asked to test from his personal experience any generalizations he has formed from the unit and to proceed once again through the learning cycle, observing that experience, modifying his concepts and forming new hypotheses to test. (The PAA will be discussed in more detail in a later section.)

The specific learning objectives of each of the fifteen units are included in Appendix A. The units are sequenced in a way which provides a cyclical mixture of individual (e.g., Achievement Motivation), interpersonal (Interpersonal Communication), and group or organizational issues (Intergroup Relations). In

this way, the student frequently has the opportunity to test his ability and to utilize the things he is learning about himself and others in an effort to solve an organizational problem. Each organizational test, furthermore, raises additional questions which are examined in future learning units.

Classroom Structure - The Concept of a Learning Team and The Role of the Teacher

The success of the experiential approach rests in large measure upon the student's ability and willingness to meaningfully involve himself in a variety of new experiences. In addition, each individual must have enough "air time" to share his reactions (to these experiences) with his peers. These needs have led us to emphasize the concept of the learning team as the most appropriate classroom structure. In a given semester, the entering master's students are divided into six such learning teams. Each team, of approximately fifteen persons, meets at the same time for the core three hour classroom session. The exercises are so constructed, in other words, that one teacher can handle an unlimited number of students (within physical constraints of the availability of space)[6] by using these small self-managed learning teams.

The learning team design has an additional advantage in that it shifts the classroom from the formal lecture/discussion format to a student-centered approach that encourages self-directed learning. The result is that the classroom moves from the traditional structure where the subject matter is dispensed from the teacher to the students, to a structure where teacher and students together investigate subject matter. This new structure allows students

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[6]The architectural designs of most educational environments (classrooms) are very indicative of our underlying assumptions about how people learn. For some research on the issue see Robert Sommer, "Classroom Ecology," Journal of Applied Behavioral Science, Vol. 3, No. 4, 1967, 489-503.

to regulate their own learning pace and to adapt subject matter to their own needs, and still allows the teacher, through the design of exercises, to focus on key conceptual issues.

Within the traditional educational structure, it is the teacher who assumes almost complete responsibility for deciding which aspects of a body of material to present to the class. The emphasis within that structure is "doing what the teacher wants done." The motivation to learn, in other words, is external - reflected in the desire to get a good grade. The major data for learning in this environment are the facts and figures as presented by the teacher and students' own feelings are seldom viewed as a legitimate part of the learning process.

In many ways the experience-based structure promotes a different learning process than the traditional structure described above. The emphasis in the self-directed structure is upon individual choice and joint responsibilities between teacher and students and among students. The student is motivated to learn because he sees the personal value and relevance of the material rather than solely because of expected grades. What excites people is being able to own their learning. Feelings are viewed as an integral part of the learning process and their expression is encouraged. The student is encouraged to experiment with new behavior. If, for example, he is typically passive and quiet in group discussions, he is encouraged to "try on for size" a more active, aggressive style. Feedback from others and his own personal reactions and feelings thus serve to help him to decide if a different style is more suited to his individual goals and needs as a future manager.

The role of the teacher in the experiential approach utilizing the learning team concept is substantially different from the traditional model. He does not, as is often assumed, abdicate his role. He assumes a different role.

Rather than controlling the learning process he facilitates the learning process. He assumes managerial responsibility for defining the broad course objectives. His task is to manage (facilitate) the learning process in a way which maximizes individual students' needs, goals, and styles, within the framework of the broad course objectives he has set. There is a content area - in this case organizational psychology - he wants his students to learn. In addition, he wants to help his students develop and internalize a learning process - to learn how to learn.

Nor is the resulting classroom environment one of chaotic disorganization as would result from a laissez-faire structure. As inappropriate as the authoritarian model - "Do what I tell you to do!" - may be for most people, the laissez-faire model - "Do whatever you want to do!" - is similarly inappropriate.[7] Whereas the traditional structure is most nearly autocractic in its nature, an experience-based structure is meant to approximate, to the extent possible, a truly collaborative structure.

It is important to keep in mind that the preponderance of a student's educational experiences have been autocratic in structure. This will influence his initial posture toward a more experiential collaborative model. Indeed, students often complain early in the semester that ".331" is too loose and unstructured. There is a paradox here for, in reality, the weekly units are highly structured in terms of being detailed and programmed. The student, however, is not dependent upon the teacher in the way he has become accustomed (in the more traditional model). Rather than being teacher-directed or student-directed, this course is structure-directed. Rather than managing progress solely against a list of topics and readings, the student and teacher collaboratively manage this organization against mutually agreed upon personal

[7]The classical study of the impact of different leadership styles can be found in, "An Experimental Study of Leadership and Group Life," by R.Lippitt and R.K. White in E. Maccoby, T. Newcomb, E. Hartley, Readings in Social Psychology (New York: Holt, Rinehart and Winston, Inc., 1958.)

learning objectives. The structure/format of the course does not change over the semester but complaints about looseness disappear. What does change is the student's willingness and ability to set and achieve personally relevant learning goals.

Out of Class Activities - The Personal Application Assignment

One activity which contributes substantially to the process of setting learning objectives is what we have called the Personal Application Assignment (PAA). An integral part of the learning loop, it will be recalled, is the "testing implications of concepts in new situations." The PAA has proven to be an excellent vehicle through which the student can try to integrate his thoughts and feelings. The following is an example of how we have introduced the notion of the PAA:

> A PAA is a short paper (4-6 pages) written after a unit which has the following characteristics:
>
> 1. deals with the class experience and/or similar or related experiences from your past.
> 2. presents an analysis of your feelings, reactions, observations, etc. with respect to the experience(s).
> 3. relates relevant concepts and theories from readings to the experience(s) and your analyses.
> 4. raises a series of questions/suggests new experiences which will help to further your learning.
>
> This four stage cycle is called the learning loop, a concept you will learn more about in Unit II - Learning and Problem Solving. Every unit in the course follows this four stage cycle. A PAA is a chance to "go through the loop" once again. PAA's are optional (see Some Ideas on Evaluation). People have found them very useful - <u>essential to their learning</u> - particularly when a person uses them as an opportunity to explore his (her) own feelings on an issue. No one but you and whichever one of us is responsible for your group ever sees your PAA without your permission. If we wish to make a copy of your PAA (for future reference) your permission will be asked. Feel free to say NO. Be assured that anonymity will always be protected.
>
> Feedback will be extensive in terms of written comments and will be very rapid. Seldom will there be more than a week delay - in on Tuesday 1, back on Tuesday 2. (That has a"laundry" or "dry cleaning" ring to it!) Individual discussion about PAA's are encouraged within the limits of your numbers and our lack of numbers.

The units are sufficiently stimulating, for most people, that there will often be as many new associations to a classroom experience as there are people in the class. To require that a person focus on only those experiences or associations that bear some immediate relevance to management is to negate one of the course's greatest potential strengths - learning how to learn. In other words, one of the hoped for outcomes of this kind of course is a greater ability to use the diversity of one's experiences and integrate them into a personally meaningful and relevant whole. On the other side of the coin, however, is the danger (reflected to a certain extent in the feedback on this course to date - discussed in a later section) that the relevance to management and organizations gets lost. We have assumed a major responsibility in our feedback to students to help them see the broader relevance of a given experience and in particular its relevance to them as future managers.

Our goal is to provide a format within which the student could feel free to explore feelings and issues of personal concern and relevance. In this regard, it is akin to a continuous learning diary, helping a student to see where he has been and where he needs to go. The PAA concept has proven to be an extremely valuable course element for our students and has been a rewarding learning experience for us. Given the number of groups with which we usually deal and the self-directed model we utilize, the PAA's have also served as the major source of student-faculty interaction.

Some Ideas on Evaluation

The role of evaluation in a course such as this is crucial and the opportunities for innovation are many. The process of openly discussing reactions and feelings in response to a given exercise is an essential element influencing student learning. Therefore, anything which acts to prevent the development of such a climate of openness ought to be avoided. It is our

strong feeling, therefore, that regardless of the specific evaluation model finally chosen, the student ought not be evaluated on his classroom participation - neither the amount or quality. Our experience has been that when one evaluates classroom participation, three things result:

1. A decrease in willingness to openly share personal feelings and reactions.
2. A decrease in willingness to take behavioral risks, i.e., experiment with new forms of behavior.
3. An increase in competitive behavior between students and a decrease in collaborative, mutually supportive behavior.

The opportunity to suspend evaluation temporarily and within this safe and secure environment to experiment with new ideas, feelings, and behavior is an important element in the success of a course built upon the experience-based model.[8]

A second premise upon which our theory of learning is based is that of shared responsibility. We conceive of the teacher as the manager of the learning process while the student is responsible, ultimately, for the management of his own learning. Both the teacher and the student have a stake in the final outcome of the course and as such ought to share the responsibility for the evaluation process.

This should not be taken to imply that students ought to grade themselves. This would be unrealistic since few organizations they will be en-

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[8]The concept of a cultural island and the issues of psychological safety are discussed in detail in Edgar Schein and Warren Bennis, Personal and Organizational Change Through Group Methods (New York: John Wiley, Inc., 1965).

tering allow their members complete control over evaluation.[9] It is also unwise in the sense that the teacher is eliminated as a possible resource. Nor does it imply that exams are inadvisable under this structure. An example of shared responsibility in regard to exams would be to have students submit questions in advance from which the teacher designs the exam. The options are numerous and opportunities for shared control are many.

We have never used an examination as a vehicle for evaluating learning in this course. This undoubtedly stems in part from our own negative associations to traditional examinations and grading procedures, but the issue is very much a deeper one. The entire format of the course is aimed at learning concepts in relationship to experiences, not concepts in the abstract. An analysis of a case problem would be much more appropriate in that the student is asked to bring relevant concepts to bear on a real problem or experience. The ideal "exam," in our minds, would be an analysis of a problem in which the student is personally involved. For us, the PAA is the closest we have come to that ideal.

The most difficult evaluation issue with which to deal concerns the nature of student learning. Outcomes will be very varied - each individual will learn something different from a given exercise - learning will often be personal in nature and be concerned with the exploration of attitudes and values. This presents a real dilemma in the sense that there are few "right or wrong" learning and no way to judge the individual importance of a given outcome.

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[9] An excellent study of the negative consequences of the traditional organizational evaluation procedure - performance appraisal - can be found in Drs. E. Kay, J.R.P. French, Jr. and H.H. Meyer, "A Study of the Performance Appraisal Interview," a research study carried out at the Lynn Plant of General Electric, New York.

Our solution to these issues has been to focus, for the purposes of evaluation and feedback, on the student's ability to integrate and articulate his learnings, rather than on the specific nature of his learnings. The student is given the option of writing a brief Personal Application Assignment (PAA) after class. As was pointed out, his task in these short papers is to integrate his feelings and reactions in class, the assigned outside readings, and similar outside experiences he may have had, and discuss its relevance to him as an individual. Our feedback and evaluation reflect our reactions to his ability to integrate these data and not the data per se. Any reaction or feeling in class, for example, is therefore legitimate. More specifically, at the beginning of the semester, we provide the class with a grading scale indicating how many points will be needed for what letter grade. One semester, for example, a student could choose to write as many as 15 PAA's. The maximum grade on each was 4, so it was possible to accumulate 60 points during the semester. An example grading scale might have been:

Number of Points	Letter Grade
40 or more	A+
35-39	A
30-34	A-
25-29	B
20-25	C
Less than 20	F

This kind of system has four positive features:[10]

[10] It was Edgar Schein who first pointed out the Skinnerian quality of this kind of grading system. The issue of external v. internal control of reinforcement reward will be discussed in detail in a later section.

1. The student knows how much work he must do in order to achieve certain goals in terms of a grade.
2. At any point in the semester, he knows exactly where he is in terms of this goal by comparing his total points to date to the amount needed for a certain grade.
3. The weaker student can reach the same level of grade achievement as a superior student by writing more papers.
4. Although the grade is related to what happens during class, participation in class is not a direct input into evaluation. (However, it would be difficult to write a high quality PAA on a given unit if a student missed class for that unit or failed to do the reading.)

There are two potential dangers in this grading system. The first concerns the teacher work load, which can become very heavy if the grading scale is too high. With large numbers of students in the course and a grading scale that requires the writing of ten perfect papers for an "A", as was our experience one semester, the instructor can expect as many as 1000 papers.

The other potential drawback is that the student may quit working after he has achieved a certain grade. This definitely happens in a number of cases and is certainly understandable given the competitive pressure of other courses. There are students who "take advantage" of the freedom provided and do the minimum amount of work necessary for the "gentleman's B." It is our feeling, however, that you can not make a student learn, but can only provide the climate and structure within which learning can take place. We, therefore, tend not to worry very much about these students. We may confront these students with their grade-oriented behavior, but the ultimate choice is up to them.

Our own experience to date with this potential problem has been gratifying. In one case, by mid-semester (due to a soft, easy grading scale) over half of the class had guaranteed A's in the course. Our fear was that they would quit working. Quite the contrary happened. Learning, not grades, had become the main course objective and these students continued to write papers. Their major concern, with which they finally confronted us, was whether we would continue to provide as much detailed feedback as we had in the past. Overall, our experience has been that a substantial percentage of students (1/3 to 1/2) do more work than is necessary to get an A in the course. In a real sense, we use this phenomenon as one measure of course success.

EVALUATING THE EXPERIENCE - OBSERVATION AND REFLECTION

Evaluating the impact of any educational experience is a difficult task. Aside from many methodological issues having to do with controls and experimental design, there are several issues basic to the educational process itself. One such set of issues has to do with the purposes of education. Why do people go to school? Why are they required to take certain courses? Questions such as these are clearly beyond the scope and intent of this paper, but it is important to keep them in mind when evaluating a particular course.

As was mentioned earlier, within the framework of our approach to Organizational Psychology, each individual is encouraged to decide on the learning goals of prime importance to him. Consequently, it is feasible to have as many different learning outcomes as there are people in the course. This complexity is, in fact, compounded by the fact that we see ourselves as communicating a set of attitudes and values.

Issues such as those raised above bear strongly on the question of the criteria one should use in evaluating the impact of an educational experience. In addition to the issue of criteria is another important and related ques-

tion of timing -- when is it most relevant to measure impact? Five years later? It is possible, particularly when dealing with attitudes, values, and interpersonal processes, that there is a "sleeper effect" - the real impact of the experience is not felt until some time after the end of the experience. These issues are raised here to put into perspective the evaluation data which follow.

The Sloan School of Management of M.I.T. conducts a full evaluation of all courses offered during a given semester. The data to be presented here were collected during the Fall semester 1969-70. It is important to keep in mind in interpreting these data that they refer to a situation in which there were six ".331" groups going simultaneously. One faculty member and two graduate assistants were responsible for the course that semester. Each staff member spent approximately one half of his time in each of the two groups for which he was primarily responsible. One set of factors measured had to do with classroom environment. A second set of factors measured had to do with a student's perception of how much he had changed on six learning outcome factors.

Each of fifty four courses/course sections was evaluated. The averaged student responses for a given course/section are then rank ordered: the rank orders for each of the six 15.331 sections under consideration were then averaged (a questionable statistical manipulation to be sure, but sufficient to provide a descriptive picture for discussion purposes) to yield a summary measure across each item measured. These data are summarized in Tables 1 and 2.

In addition to these data concerning specific environmental dimension and learning outcomes, each student was also asked two more general questions:

Table 1

Classroom Environment Dimension

Rank Order of 15.331 in Comparison to All Other Courses (Section) Measured

(1 = highest rank, 54 = lowest rank)

Dimension	Rank Order Position of Each Six Sections (averaged rank) *
Feedback to Students	3.6
Student Autonomy	9.3
Classroom Interaction	12.0
Practical Emphasis	23.0
Course Organization and Presentation	42.0
Working Pressure	36.0

Table 2

Learning Outcomes

Rank Order of 15.331 In Comparison to All Other Courses (Section) Measured

(1 = highest rank, 54 = lowest rank)

Dimension	Rank Order Position of Each of Six Sections (averaged rank)
Attitude Change	7.0
Communication Ability	5.0
Self-Awareness	10.0
Decision-Making Ability	39.0
Problem Solving Ability	35.0
Knowledge of Business	47.0

* If the six sections had occupied the top six ranks, the averaged rank score would be 3.5. Conversely, if they had fallen into the last six positions, their averaged rank score would be 51.5.

a) How useful will this course be to you in the future compared with other courses?

b) Was the homework relevant to class sessions in this course?

Comparative data with all Sloan School courses is not yet available. The percentage distributions across all six sections of 15.331 (N = 105) are presented in Table 3.

WHAT DO THE DATA MEAN? SOME RELEVANT CONCEPTS AND GENERALIZATIONS

From the data in Tables 1 and 2 it is clear that we have achieved our goal of creating a course environment and format which enhances the student's ability to explore their own attitudes, values, and indeed, themselves as human beings. Students report major learnings in the areas of attitudes, self-awareness, and ability to communicate. Feedback, via the weekly PAA's is substantial and a learning structure emphasizing individual autonomy and peer group interactions has been achieved.

The remaining data in Tables 1 and 2 raise some serious questions and several confusing paradoxes, particularly when viewed in conjunction with the data in Table 3. Students pereived themselves as having gained relatively little learning in the areas of decision-making, problem-solving, and general business knowledge. In the face of the fact that almost two-thirds of the students report (Table 3) that this course will be "much more useful" to them in the future compared with other courses, this is rather confusing.

The course is clearly designed, as was pointed out earlier, to help students "to explore their own attitudes and feelings with respect to themselves, others, and the managerial role. In the process, we wanted to help them to sharpen their diagnostic skills with respect to understanding themselves, others, groups, and social systems." Assume for the moment that decision-

Table 3

Percentage Distribution of Responses to Two General Questions Asked of Sloan School Students for Six Sections of 15.331 Only

(N = 105)

a) How useful will this course be to you in the future compared with other courses?

1. Much less useful	11%
2. Of average usefulness	27%
3. Much more useful	62%

b) Was the homework relevant to class sessions in this course?

1. Always relevant	63%
2. Sometimes relevant	27%
3. Seldom relevant	10%
4. Never relevant	0%

making and problem-solving reflect the cognitive-technical side of management and that attitudes, ability to communicate, and self-awareness reflect the human side of management. ".331" is designed to emphasize the human side - not from the perspective of two orthogonal dimensions or skill areas, but as a part of the total managerial process. It is relevant to note here that the two sections for which the author was primarily responsible, perceived ".331" to have substantially more "practical emphasis" (rank of 8th and 11th) than the other four sections (average rank of 30th) handled by graduate students. What I could do that they were ill-equiped to do was tell "war stories" from my experiences to demonstrate the broader relevance of the classroom experiences. This type of direct student-faculty contact is undoubtedly the best way to provide integrative inputs and will be emphasized more in the future.

The relatively low ranking received on "course organization and presentation" seems explainable in large measure by the wording of the items used to measure this dimension. The emphasis in most of the items are on the professor, "The professor presents the material clearly." The structure of the course is specifically designed to deemphasize the traditional professional role. Additionally, virtually every group experiences, early in the term, considerable frustration and confusion as they attempt to adjust to this very new and different learning model.

This period of unfreezing (as it has been referred to by Schein, Lewin, and others[11]) is an inevitable phenomenon in ".331." The student's expectations of the learner's and teacher's role are quickly disconfirmed.[12] The confusion

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[11] Warren G. Bennis, Edgar H. Schein, Fred I. Steele and David E. Berlew(Eds., Interpersonal Dynamics (Homewood, Ill.: The Dorsey Press, 1968). See Part III: Personal Change Through Interpersonal Relationships, pp. 333-504.

[12] Omar K. Moore and Alan R. Anderson, op cit., discuss four perspectives a person can assume in a learning situation. Two of these - that of an agent or a patient - are analogous to the active/passive distinction made here.

and anxiety resulting from this period of unfreezing may contribute to their sense of relative disorganization.

The issue of working pressure is more complex. For, in addition to asking "how much" pressure is appropriate or useful one must also ask "by whom" and "how" should pressure be applied. The "by whom" and "how" questions are at the very core of one's (implicit or explicit) theory of learning and are basically a question of the influence process a teacher chooses to employ. Kelman's[13] model of the influence process is easily relatable to this question.

There are essentially three ways a teacher can control (influence) the behavior of his students. By exercising his ability to reward and punish via the power to give grades, the teacher maintains some control over the student's ability to achieve certain personal goals - entrance into a Ph.D. program, a high paying challenging initial job, and respect and acceptance from fellow students are just a few examples. To the extent that a teacher emphasizes external rewards/punishments to create "working pressure," he is reflecting, within Kelman's model, a compliance based influence process. The long run effects of this model are clear to all - when the exam (the immediate cause of the compliance) is over learning often stops!

A second source of influence is the process of identification. Students identify with teachers either because of their charasmatic qualities or because of their competence in a particular field. The student thus feels pressure to work because he wants those skills or qualities possessed by the

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[13] Herbert C. Kelman, "Processes of Opinion Change," in W. Bennis, K. Benne, and R. Chin (Eds.), The Planning of Change (New York: Holt, Rinehart and Winston, 1962). A more expanded discussion of five types of power or sources of influence can be found in D.A. Kolb and A. Frohman, "Organizational Development Through Planned Change: A Developmental Model," (Sloan School of Management, Working Paper #453-70, M.I.T., 1970).

person whom he admires and respects - the teacher. At some point, however, if this "influence through identification" is to become meaningful (become refrozen to use Schein's terminology), the individual must own it for himself.

This later dimension of the influence model is called internalization. The individual behaves in a certain way because he comes to see this behavior as helping him to achieve personally relevant goals. In this clearly ideal situation, the pressure to work comes from within the person. This is the goal of ".331." The role of the teacher within an influence model based on internalization is to:

a) facilitate the goal-setting process

b) help to structure situations (e.g., develop classroom exercises, suggest readings) through which these goals can be achieved

c) provide meaningful feedback (to be sharply distinguished from the giving of a grade which is evaluation - evaluation and feedback are clearly separable processes).

This teacher role is directly analogous to McGregor's Theory X vs. Theory Y conceptualization of the managerial process.[14] We have assumed that organizations of the future will be most effective - in terms of productivity, ability to adapt to a rapidly changing environment, and individual growth and satisfaction - to the extent that they are managed by men whose managerial philosophy and values flow from McGregor's theories.[15] Our managerial style, within the context of this organization (15.331) where students are supposed to learn about human factors in management, is consistent with the managerial style we

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[14] Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill 1960).

[15] Gardner raised very similar issues in his book, Self-Renewal: The Individual and the Innovative Society (New York: Harper & Row, 1963).

hope they will employ in their future careers. It would be paradoxical, indeed, to say that "people can be trusted, desire responsibility and control over their behavior, etc." on the one hand while treating them as if "they can not be trusted, do not desire personal responsibility, and must have external controls imposed" on the other hand.[16]

A final issue of importance concerns the relationship of any given course to a total educational program. As a school we are organized into several functional groups concerned with various aspects of the managerial process. Consequently, like any other organization, we grapple with the problems of "differentiation and integration."[17] As a result of personal differences and characteristics of the functional areas in which we specialize, as a faculty we are differentiated in terms of attitudes and values, learning styles[18] and teaching styles. As is true in any organization, the members of differential groups or departments naturally develop differentiated orientations. The phenomenon of differentiation raises a major complicating factor within an educational institution which does not develop as severely in a more traditional organization.

A given employee will not, over the short term, be asked to work in several different functional departments. He, therefore, has time to learn about and adapt to the particular orientation reflected in a given department.

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[16] McGregor, op cit.

[17] Paul R. Lawrence and Jay W. Lorsch, Organization and Environment (Homewood, Ill.: Richard D. Irwin, Inc., 1969) and Jay R. Galbraith, "Organizational Design: An Information Processing View," (M.I.T. Working Paper #425-69, October 1969). Galbraith's paper represents an important extension of the Lawrence and Lorsch work.

[18] Edgar H. Schein, "Attitude Change During Management Education. Administrative Science Quarterly, Vol. 11, No. 4, March 1967, pp. 601-628. See also, Frank Perna, Jr., op cit. for data on this point.

A given student, in contrast, in the course of one week, is required to be a member of numerous learning organizations. Each of these learning organizations (courses, groups within a department, a department within a school) will, very appropriately, be concerned with a different aspect of the environment - in our case the total process of management. The resulting potential stress put on students needs to be carefully managed. Integrative mechanisms (the other side of the differentiation dilemma) at the total organizational level of the school are essential in order to insure that the movement in and out of necessarily diverse (in terms of content and learning method) learning organizations is integrative and collaborative rather than dysfunctionally conflicting and competitive.

APPENDIX A

Unit I. ORGANIZATION SOCIALIZATION

Learning Objectives:

1. To introduce the concept of the psychological contract.
2. To articulate and share expectations (faculty and student) relevant to the organization (this group) you are about to join.
3. To identify problem areas based on conflicting expectations and take steps to resolve any such conflict.

Unit II. LEARNING AND PROBLEM SOLVING

Learning Objectives:

1. To describe the learning process.
2. To identify individual learning styles.
3. To set learning objectives for the course.
4. To identify available resources for learning.
5. To define and establish norms for an effective learning organization.

Unit III. ORGANIZATIONAL DECISION-MAKING

Learning Objectives:

1. To participate in and observe a simulation of the process by which an organization makes decisions.
2. To experience and observe the variety of interpersonal and organizational issues which can operate to inhibit effective decision-making.
3. To identify alternative ways of behaving in groups which may enhance individual satisfaction and group effectiveness.

Unit IV. MOTIVATION AND ORGANIZATIONAL CLIMATE

Learning Objectives:

1. To learn about three social motives and how they are defined.
2. To gain insight into your own motive patterns.
3. To explore the interface between the motives of an individual and the climate of an organization.

Unit V. ACHIEVEMENT MOTIVATION

Learning Objectives:

1. To explore your own need to achieve and measure its intensity in an action situation.
2. To create a situation in which you are expected to act in ways typical of the person with high achievement motivation.
3. To learn about achievement motivation and its relationship to economic productivity.

Unit VI. POWER AND AFFILIATION MOTIVATION

Learning Objectives:

1. To understand the impact of power and affiliation motivation on the behavior of people in organizations.
2. To explore ways of decreasing the negative consequences of power-motivated competition between individuals in organizations.
3. To understand the impact that our assumptions about another's motivation have upon our own and other person's behavior.
4. To experience a different mode of learning (non-verbal interactions) about the nature of power and affiliation relationships.

Unit VII. DECISION-MAKING IN GROUPS

Learning Objectives:

1. Increase understanding of interpersonal processes that facilitate or hinder a group's ability to function effectively.
2. Sharpen ability to observe and diagnose these process factors.
3. Practice trying to combine the roles of a participant in task accomplishment with the role of an observer.

Unit VIII. INTERPERSONAL PERCEPTION

Learning Objectives:

1. To understand the factors which influence the perception we have of other people.
2. To understand the manner in which perceptions of other people, particularly first impressions, influences interpersonal relationships.
3. To explore methods for giving and receiving feedback by sharing the perceptions people hold of each other.

Unit IX. INTERPERSONAL COMMUNICATION

Learning Objectives:

1. To understand the barriers to effective communication and to explore ways of eliminating some of these barriers.
2. To increase ability to listen to and to understand another person.
3. To increase sensitivity to other than verbal modes of communication.
4. To give feedback to group members on their personal communication style.

Unit X. LEADERSHIP

Learning Objectives:

1. To understand the dynamics of leadership.
2. To examine the effectiveness of different leadership strategies.
3. To identify one's own leadership style and assess its consequences on others and on performance.

Unit XI. INTERGROUP RELATIONS

Learning Objectives:

1. To increase understanding of the problem of sub-optimization in organizations, particularly where group goals take precedence over total organizational goals.
2. To develop strategies for reducing the negative effects of competition on intergroup effectiveness.
3. To explore ways of establishing collaborative, as opposed to competitive, intergroup relations.

Unit XII. ORGANIZATIONAL STRUCTURE AND COMMUNICATION

Learning Objectives:

1. To understand the concepts of organizational structure and communications networks.
2. To understand the impact of varying structures upon task performance and individual's feelings of organizational satisfaction, commitment and involvement.
3. To develop mechanisms for diagnosing the communications structure of a group or organization.
4. To understand the nature of and effect of the organizational structure(s) and communication network(s) which have developed thus far in this learning organization.
5. To test ways of changing the nature of an organization's structure and patterns of communication to facilitate present goal achievement and future adaptability.

Unit XIII. PERSONAL GROWTH AND CAREER DEVELOPMENT

Learning Objectives:

1. To describe the role of goal setting in career development.
2. To illustrate the factors which characterize effective goal setting.

Unit XIV. HELPING AND CONSULTING

Learning Objectives:

1. To increase understanding of the psychological dynamics of helping relationships.
2. To practice giving help.
3. To practice receiving help.

Date Due

NOV 3 '76
AUG 29 '83
FEB 14 '76
DEC 07 '78
MAR 3 '77
MAR 28 '77
APR 22 '77
APR 3 '78

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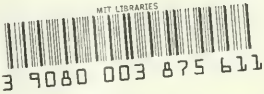

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